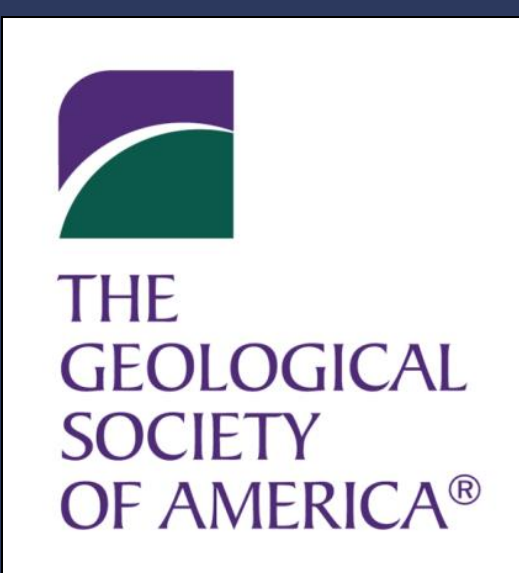


Increasing Shorebird Outreach at Gulf Islands National Seashore

Michael Bradley, Susan Teel

Gulf Islands National Seashore: Florida District



Gulf Islands National Seashore

- 211.7 square miles
- About 80% of park is in submerged waters
- Largest national seashore in the United States
- Park spans from Florida to Mississippi (excluding Alabama)
- 12 threatened/endangered species

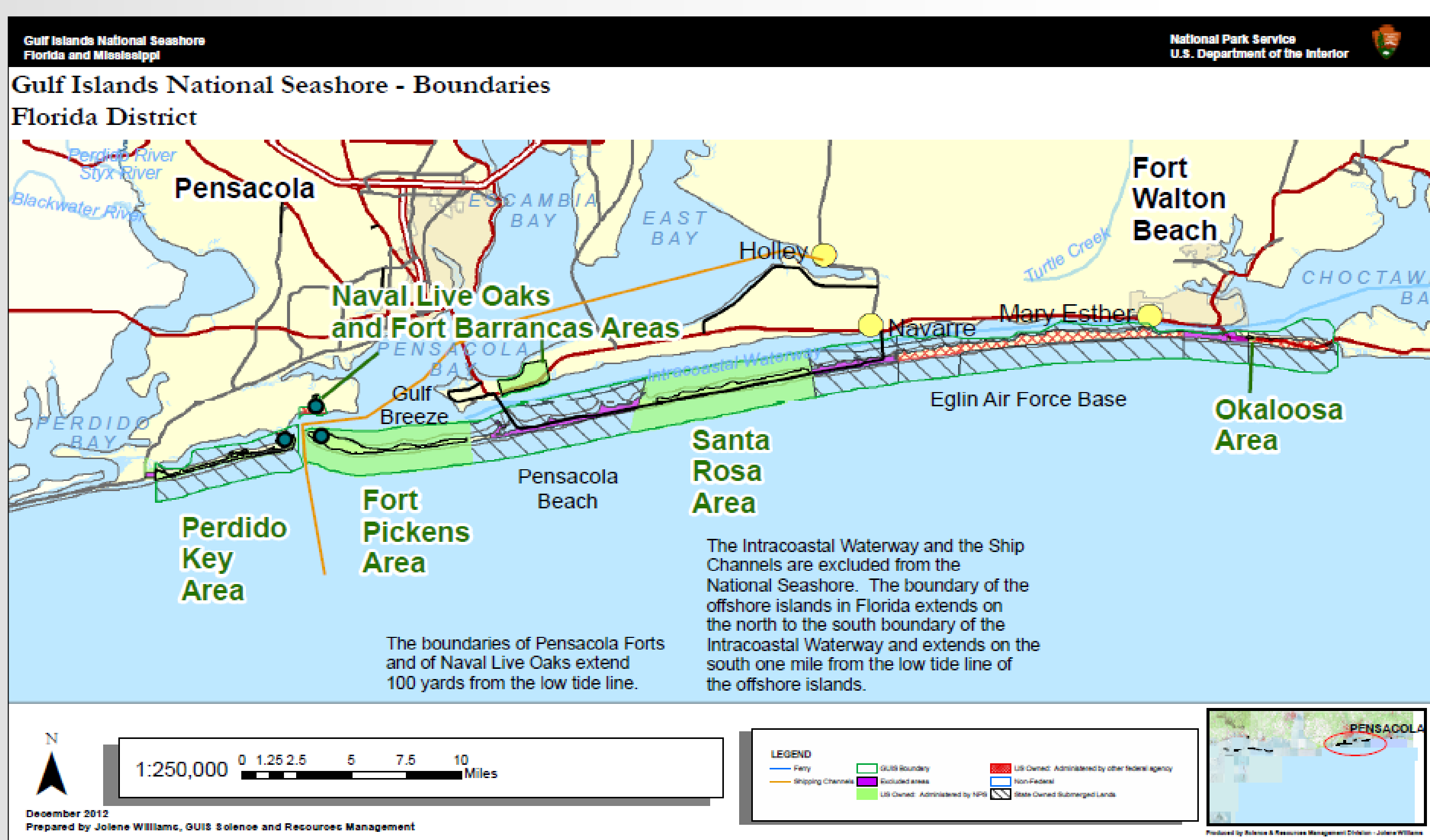


Figure 1: Location of Gulf Islands National Seashore

Threats to Shorebirds

Human nuisance

- Visitors trespassing into closed areas
- Visitors picking up eggs
- Kites - Force birds to flush out their nests

Habitat loss

- Pensacola Beach development– popular beach destination

Road casualties

- Wind turbulence
- Direct hit

Predators

- Avian, Crab, Coyote

The death of one bird can result in loss of new nests and up to 6 fewer chicks.

Outreach Efforts

Activities

Park Booths - set up around park/community (Figure 6)

Roving - walking beach and fort

Distribute Rack Cards - informational pamphlets

Bike Tours - lead tour to park and inform about shorebirds

Kids Crafts - learning activity/craft session

Pace Car - drive through park as speed limit setter

Reader Boards - both sides of 20mph zones: “Shorebird Nesting Areas”

Speed Detector Signs - flash if going to fast

Informational Causality Sign - placed at fee gates; gives mortality rates

Local Press Coverage - before/during season



Figure 6: Booth set-up at the Holiday Inn Express

Outreach Results

Increased outreach numbers

- 16% increase from 2014 season (Figure 7)

Road mortality rate has fluctuated since the start of outreach in 2013 but is still significantly lower (Figure 8)

- In 2014 there was extensive flooding in the beginning of the season which led to fewer nests
- 2013 and 2015 both had higher numbers of nests than 2014
- Increase of Black Skimmer nests from 2014 (3 colonies)
- Less Snowy Plover nests in 2015

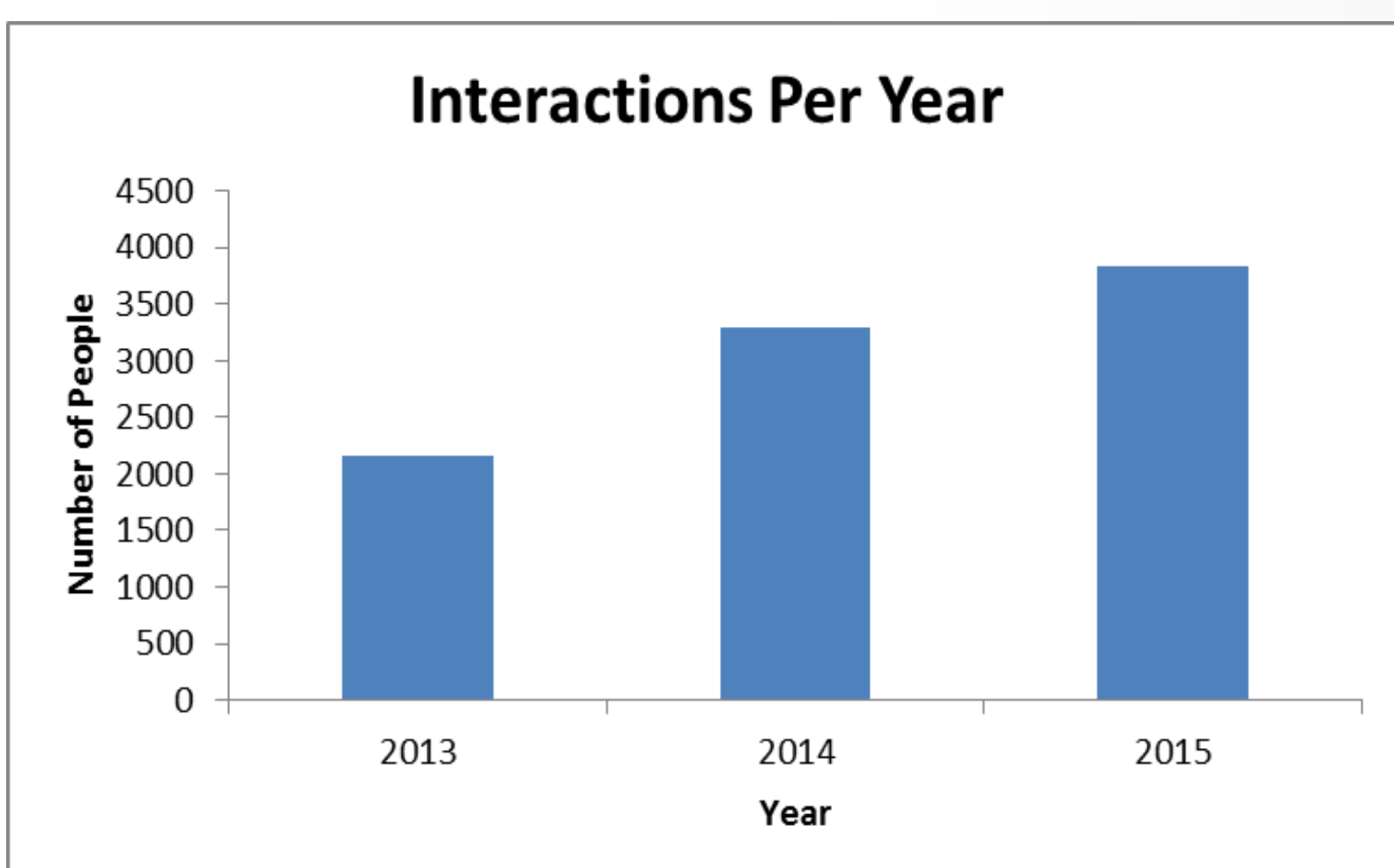


Figure 7: Outreach numbers per year. There is an increase each year.

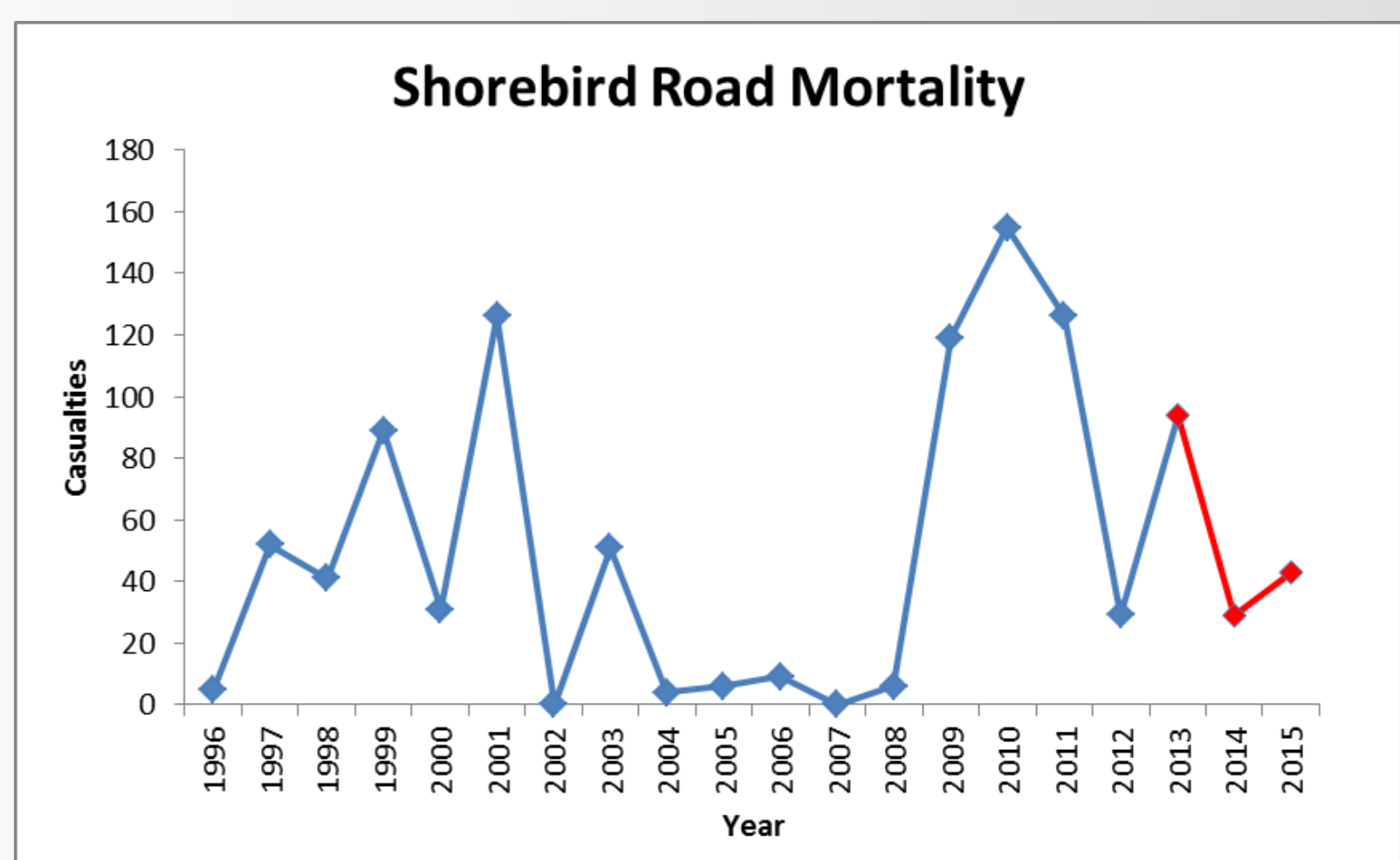


Figure 8: Graph shows shorebirds killed by year. The red highlights the last 3 years of bird mortality

Shorebirds

Snowy Plover (*Charadrius alexandrinus*)

- Status: Threatened
- Solitary interdune nesters
- Good umbrella species/indicator species



Figure 2: Snowy Plover
Source: <http://www.nps.gov/>

Least Tern (*Sternula antillarum*)

- Status: Threatened
- Colonial nesters in open areas
- Feed on fish by diving into ocean



Figure 3: Least Tern
Source: <http://floridabirdingtrail.com/>



Figure 4: Least Tern chick

Black Skimmer (*Rynchops niger*)

- Status: Threatened
- Colonial nesters in open areas
- Feed on fish by skimming top of water



Figure 5: Black Skimmer
Source: <http://www.nps.gov/>

Discussion

Conclusion

- Deaths higher than previous year, but still lower than the start of outreach
- Deaths in 2015 may be higher due to increased nests

Future Work

- Outreach should continue each nesting season
- Increase help from other workers and volunteers in the park to make it easier to contact more people
- Increase outreach to every day of the week

Acknowledgements

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